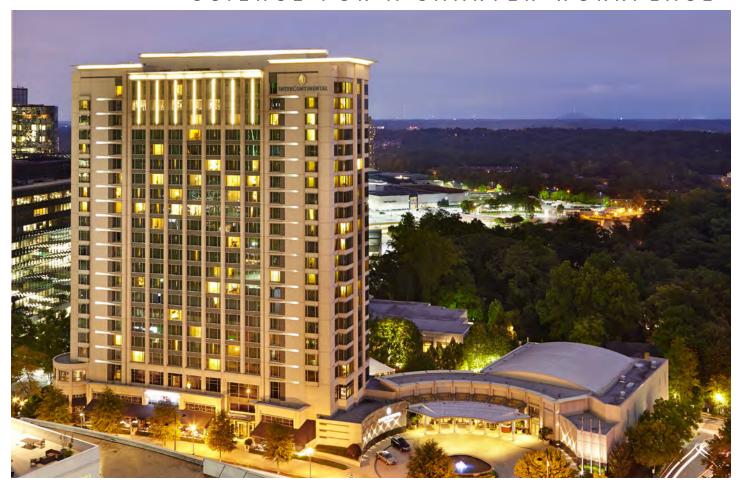


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From the Consortium Chair



I am excited to welcome you to the 12th Annual SIOP Leading Edge Consortium in beautiful Atlanta, Georgia! This year's event is our biggest ever, and we are excited to share two days of learning and insight with you.

This year, we will share expert advice and case examples from thought leaders in academics and business. Our exciting and diverse program will delve into different methodologies, different business problems, and different industries.

This event would not be possible without the support and dedication of the SIOP Administrative Office, and the Leading Edge Consortium planning committee: Rick Guzzo, Hailey Herleman, Fred Oswald, Evan Sinar, and Scott Tonidandel. We are fortunate for the support of a terrific group of sponsors for our event as well.

We have worked hard to create a Leading Edge Consortium that will be energizing and informative. The true test of our success will be whether you are able to take the information shared and relationships forged here and apply them in your own organizations!

Alexis A. Fink Leading Edge Consortium Chair

To access the 2016 LEC presentations, visit my.siop.org/lec/Resources/



To access the consortium WiFi, use the network labelled InterContinental Buckhead Conf and use the password IBMKenexa2016

6	Thursday, October 20	
4:00 – 9:00 PM	Registration: Windsor Pre-Function	
7:30 – 9:00 PM	Welcome Reception, presented by Hope Room SCIENCE-EXPERIENCE-RESULTS	
O O O	Friday, October 21	
7:00 AM – 5:30PM	Registration/Help Desk: Windsor Pre-Function	
7:00 – 8:00 AM	Buffet Breakfast presented by TALENT Windsor AB	
8:00 – 8:20 AM	Welcome and Introduction: Alexis Fink, LEC Chair Windsor CDE	
8:20 – 9:20 AM	Morning Session: Keynote Alan Wild, IBM: "Managing Employee Engagement in a Social World"	
	Standard measures of employee engagement typically rely on periodic work-force surveys using structured questionnaires. Today, we can measure employee engagement on a continuous basis using unstructured data in the form of social media commentary. This means we can receive real time insights into what drives and what damages employee engagement and take immediate action. That said, employee use of social media can come at a cost as employees begin to use publis social networks as alternatives to long standing internal grievance procedures.	
9:20 – 9:25 AM	Section Intro: Academic Grounding - Alexis Fink, Intel	
9:25 – 9:55 AM	Eden King, George Mason University "Contextualizing the Conversation: Three Big Questions About Data"	
9:55 – 10:25 AM	Coffee Break, presented by Human RESOURCES RESEARCH ORGANIZATION Windsor Pre-Function	
10:25 – 10:55 AM	Elizabeth McCune, Microsoft "Measuring Culture Change"	
10:55 – 11:00 AM	Section Intro: Collection Methods - Hailey Herleman, IBM	
11:00 – 11:15 AM	Sherie Apungu, UnitedHealth Group "Collecting Data Beyond the Human Resource Information System"	
11:15 – 11:30 AM	Allen Kamin, GE "Enhancing Data Availability to Improve Employee Experience and Better Understand Talent"	

11:30 AM – 12:00 PM	Jeffrey S. Saltz, Syracuse University "Exploring Data Sources Available for Talent Analytics"	
12:00 – 1:00 PM	Lunch – Presentation of Human Resource Management Impact Award 2016 Recipient: Jack in the Box Inc. Venetian Ballroom	
1:00 – 1:30 PM	Jackie Ryan and Hailey Herleman, IBM "Big Data Platforms for Workforce Analytics"	
1:30 – 1:35 PM	Section Intro: Analysis Methods – Alexis Fink, Intel	
1:35 – 2:05 PM	Steve Kozlowski, Michigan State University "Big Data and Computational Organizational Science: A Peek On and Over the Horizon"	
2:05 – 2:35 PM	Aman Alexander and Mark Van Buren, CEB "Applying Predictive Analytics to Application Data: Higher Quality for Less Effort"	
2:35 – 3:05 PM	Ben Taylor, HireVue "The Super-Human Era: The Latest in HR Data Science Innovation"	
3:05 – 3:25 PM	Coffee Break, presented by Human RESOURCES RESEARCH ORGANIZATION Windsor Pre-Function	
3:25 – 3:30 PM	Section Intro: Results Methods - Evan Sinar, DDI	
3:30 – 4:00 PM	Jennifer Burnett, Cornerstone on Demand "Revealing Compelling Business Insights at Each Level of Talent Analytics Maturity"	
4:00 – 4:25 PM	Evan Sinar, DDI "Finding the Face of Big Data: Visualization to Inform and Influence"	
4:25 – 4:50 PM	Richard Landers, Old Dominion University "Interdisciplinary Best Practices for Explaining and Demonstrating Insights Drawn From Big Data"	
4:50 – 5:20 PM	Paul Tsagaroulis, US General Services Administration "Lessons Learned in Data Visualization: Workforce Dashboards at a Federal Agency"	
5:20 – 5:30 PM	Closing	
6:00 – 9:00 PM	Friday Night Networking Experience (preregistration required, optional) presented by quintela.io City Club of Buckhead (Please meet in hotel lobby at 5:55 PM)	

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Saturday, October 22

7:00 AM- 2:30 PM Registration/Help Desk

Buffet Breakfast, presented by **TALEN** 7:00 - 8:00 AM

Windsor AB

8:00 - 8:10 AM**Opening Remarks**

Windsor CDE

8:10 - 9:10 AM

Keynote Address: Dan Putka, HumRRO

"Big Data Mythbusters:

Benefiting From Big Data Analytic Methods With Your Small Data"

Myths surrounding Big Data analytic methods pervade the I-O field. Common myths include the notion such methods are irrelevant for smaller data sets, and produce results that are overly optimistic, lack theoretical value, and are too hard to convey lay decision makers. These myths will be intro-

duced and debunked.

9:10 - 9:40 AM Sara Roberts, Category 1 Consulting

"From Activity to Action:

How to Deliver Analytic Insights in An Effective Manner"

Coffee Break, presented by Humpro 9:40 - 10:10 AM

10:10 - 10:15 AM Section Intro: Analytics Teams - Rick Guzzo, Mercer

10:15 - 10:40 AM Adam Myer, Johnson & Johnson

"Buying and Building Workforce Analytics"

10:40 - 11:05 AM Alexis Fink, Intel

"From Optimism to Impact: Getting Results With Talent Analytics"

11:05 – 11:25 AM Olivier Vankerk, UnitedHealth Group

"Building the Case and the Talent to Deliver Workforce Analytics"

11:25 - 11:45 AM Nathan Mondragon, HireVue

"Data Science and I-O: Birds of a Feather or Lone Wolves"

Luncheon, presented by $\underbrace{DATA\ SOLUTIONS}$ 11:45AM - 12:45 PM

Windsor AB

Section Intro: Risks & Privacy - Rick Guzzo, Mercer; Evan Sinar, DDI 12:45 - 12:50 PM

12:50 – 2:20 PM Panel: "Risks, Privacy, and Ethical Challenges in Big Data Talent Analytics"

Eric Dunleavy, DCI Consulting; Ed Freeman, University of Virginia;

Cyrus Mehri, Mehri and Skalet; Rich Tonowski, EEOC

2:20 – 2:30 PM Closing Remarks

Thank you for attending the 12th Annual SIOP Leading Edge Consortium!

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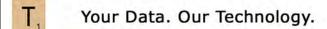
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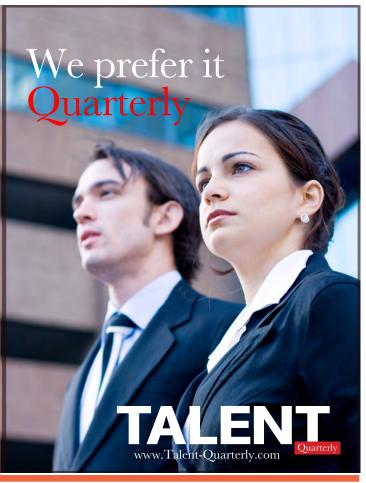


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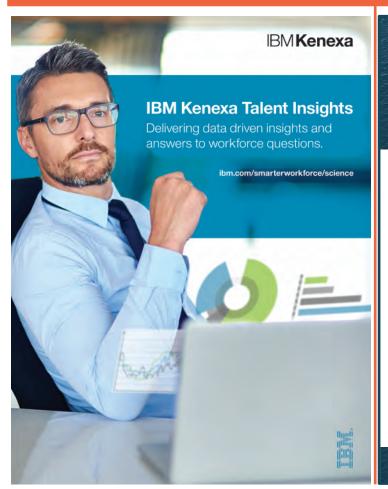
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LEC 2016 Resource Guide

Talent Analytics: Data Science to Drive People Decisions and Business Impact

SIOP thanks Remy Jennings and Mary Monroe of Davidson College for their assistance in preparing this list.

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Technological Resources for Data Analytics

General Resources

Amazon Machine Image: Cloud computing through Amazon Web Services

Deeplearning4i: Open source distributed deep-learning library written for Java and Scala

Funf Open Sensing Framework: Open source tools for creating sensing applications for mobile phones Hadoop: Distributed storage and processing of large data sets across clusters of commodity servers

IBM Watson Developer Cloud: Suite of tools including text tone & emotion analyzers, natural language classification, image analysis, etc.

Kdnuggets.com: Resources, news, software, and tutorials related to business analytics, big data, data mining, and data science

Microsoft Azure: Cloud computing through Microsoft's cloud platform

Revolution Analytics: Version of R for big data statistical analysis

Tableau: Data visualization software focused on business intelligence

Waikato Environment for Knowledge Analytics (Weka): Free suite of visualization tools and machine learning algorithms for data analysis and predictive modeling

R packages

Social Media

Rfacebook: Interface for Facebook API

Rflickr: Interface for Flickr API Rlinkedin: Interface for LinkedIn API

SocialMediaMineR: Data about the number of hits of URLs on

social media

tumblR: Interface for Tumblr API twitterR: Interface for Twitter API

Text Mining

lsa: Latent semantic analysis

NLP: Basic methods for natural language processing

RTextTools: Machine learning package for automatic text classifi-

cation geared toward social scientists

textir: Multinominal logistic regression for phrase counts tm: Comprehensive framework for text mining applications

zipfR: Word frequency distribution analysis

Visualization

bigvis: Data plots using aggregation and smoothing techniques

ggplot2: Complex plots using grammar of graphics

googleVis: Interface for Google Charts API tabplot: Visualizations of multivariate datasets

threejs: 3D scatterplots and globes

Parallel Computing

parallel: Coarse-grained parallelism

pdbMPI: Single program/multiple data parallel computing

Rmpi: Interface to MPI

snowfall: Simple parallel computing

Data Mining

arules: Market basket analysis and association rules

cluster: Basic clustering techniques

FactoMineR: Multivariate exploratory data analysis rattle: Graphical user interface for data mining algorithms

Machine Learning

bigrf: Random forest computations in parallel for data sets too large for storage in memory

e1071: Functions for support vector machines, bagged clustering,

gbm: Gradient boosting

and Naïve Bayes clustering

glmnet: Lasso and elastic net regularized generalized linear models

nnet: Neural networks

randomForest: Classification and regression using random forest

algorithms

rpart: Recursive partitioning and regression trees

Python Packages

Social Media

flickrapi: Interface for Flickr API

python-linkedin: Interface for LinkedIn API python-sdk: Interface for Facebook API python-twitter: Interface for Twitter API pytumblr: Interface for Tumblr API

Text Mining

NLTK: Natural language processing textmining: Statistical text analysis

Visualization

Bokeh: Visualizations designed for optimal web browser viewing

Matplotlib: 2D plotting library Mayavi: 3D visualization

pygooglechart: Interface for Google Charts API

Tutorials

Analyzing Social Media Data in R:

http://thinktostart.com/category/datascience/r-tutorials/

Big Data Resources for Python and R:

https://www.datacamp.com/community/tutorials/learn-data-science-resources-for-python-r#gs.TYnrlYM

Classification Trees in R and Python:

https://www.analyticsvidhya.com/blog/2016/04/complete-tutorial-tree-based-modeling-scratch-in-python/#nine

Cluster analysis in R:

http://www.stat.berkeley.edu/~s133/Cluster2a.html

Data Mining in R: Rdatamining.com

FactoMineR Tutorial:

https://www.youtube.com/playlist?list=PLnZgp6epRBbTsZEFXi_p6W48HhNyqwxlu&feature=view all

ggplot2 in R Tutorial:

http://tutorials.iq.harvard.edu/R/Rgraphics/Rgraphics.html

Machine Learning in R:

https://www.datacamp.com/community/tutorials/machine-learning-in-r#gs.kTLLgDA

Parallel Computing

dispy: Single instruction/multiple data parallel computing

Jug: Task-based parallelization mpi4py: Interface to MPI

papyros: Master-slave based parallel processing

Machine Learning

Orange: Component-based data mining

scikit: Set of modules for machine learning and data mining

Natural Language Processing using NLTK in Python:

http://www.nltk.org/book/ch01.html

Neural Networks in R:

http://www.di.fc.ul.pt/~jpn/r/neuralnets/neuralnets.html

O'Reilly Course on Data Visualization using Python:

http://shop.oreilly.com/product/0636920046592.do?sortby=bestSellers

Parallel Computing in R using snowfall:

http://www.informatik.uni-ulm.de/ni/staff/HKestler/Reisensburg2009/PDF/snowfall-tutorial.pdf

Support Vector Regression in R:

http://www.svm-tutorial.com/2014/10/support-vector-regression-r/

Text Mining in R:

https://rstudio-pubs-static.s3.amazonawscom/ 31867_8236987cf0a8444e962ccd2aec46d9c3.html



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